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Identifiers-Linguistic Relativity

Both sociolinguistics and psycholinguistics are relatively recent areas of study and they tend to overlap. One way in which they overlap is in the selection of topics, among them bilingualism and linguistic relativity. Studies of linguistic relativity demonstrate that, although there are clear surface distinctions between the way languages map physical reality, and although these distinctions may influence the ease of memory and description, there is no evidence that these differences are fundamental or that they prevent the formation of concepts. Concerning the question of how bilingualism affects language development, no final statements can be made. One extreme position, the balance theory, holds that each individual has only a certain amount of language learning ability and if it is divided between two languages, the knowledge of each language will be weaker. At present language testing instruments are not precise enough to test this hypothesis. While the evidence now collected seems to favor the balance theory, a great deal more study is needed on this complex question. Therefore, although no one suffers cognitively by learning one language rather than another, there will possibly be some loss in linguistic ability when two languages are learned. Unless this is offset by increased motivation, there will be a loss in other subjects. Bilingual education is closely tied to a society that accepts both languages. (JD)

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Some psycholinguistic and sociolinguistic aspects of bilingual education[1]

Bernard Spolsky

Studies of the psychology and of the sociology of language are not new, but it is only in the last ten years or so that we can speak of psycholinguistics and of sociolinguistics as areas of major importance. Psycholinguistics may be dated from the activities of a group of psychologists and linguists that led to the publication in 1954 of a monograph called Psycholinguistics: a survey of theory and research problems, edited by the psychologist Charles E. Osgood and the linguist Thomas A. Sebeok.[2] Sociolinguistics is even newer; the first conference devoted exclusively to the field was held in 1964; its results have been published.[3] The two fields are broad in their coverage; Diebold was not at all unreasonable in his doubting that one can separate psycholinguistics from the disciplines from which it has evolved, and the topical section heads used in Saporta's reader[4] suggest the breadth: The nature and function of language, approaches to the study of language, speech perception, the sequential organization of linguistic events, the semantic aspects of linguistic events, language acquisition, bilingualism, language change, pathologies of linguistic behavior, linguistic relativity and the relation of linguistic processes to perception and cognition. Similarly with sociolinguistics. The

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topics covered at the UCLA conference included folk-linguistics, linguistic change, language planning, urban dialects, linguistic relativity, prestige factors, writing systems, and bilingualism.

With all this diversity, it is not surprising that the two fields overlap. The center of these overlappings is of course in the relation of each to linguistic theory. The relation of psycholinguistics to linguistic theory has been emphasized by the transformationalists' interest in a grammar as a prerequisite for the explanation of language acquisition. The emphasis given to studies of the development of language in children owes much to Chomsky's statement of interest in the nature of language acquisition. Much work in psycholinguistics has been concerned with attempting to find support for grammatical hypotheses. Sociolinguistics too is most concerned with linguistic theory, although the exact approach may range from that of those who wish to modify linguistic theory to fit into it the facts of social language use, and those who emphasize the distinction between language and language use. The problem is made clear by Chomsky when he emphasizes that, as he sees it, the task of linguistic theory is to deal with

> an ideal speaker-listener, in a completely homogeneous speech-community, who knows its language perfectly and is unaffected by such grammatically irrelevant conditions as memory limitations, distractions, shifts of attention

and interest, and errors (random or characteristic) in applying his knowledge of the language in actual performance.[5] Psycholinguistics, rather, is concerned in the broadest sense with the relations between messages and the characteristics of human individuals who select and interpret them.[6] It tends then to work more closely with performance, as of course does sociolinguistics with its concern with social factors in language use. But to both fields, linguistics proper remains the link.

Another overlap has been in the selection of topics. Two topics of special interest to us today show up in each field: linguistic relativity, and bilingualism. These are the subjects I want to look at in detail with you; and discuss with you theoretical and empirical data that is relevant to three questions:

1. Does it make any difference to your intellectual, emotional, cognitive, development, whether you speak one language, or another? This is the linguistic relativity question.

2. Does it make any difference to your development whether you speak one language or more?

3. What factors account for the development of bilingualism?

Linguistic Relativity

The notion that thought is in some way dependent on language, and consequently that people who speak different languages perceive reality, and think, differently is a widespread one, but its most influential statement has been by the American linguist, Benjamin Whorf. In a number of papers, many of them published

only after his premature death in 1941,[7] he states the principle that an observer's perception of the world around him is controlled in a fundamental way by the language he speaks. He compared an Indian language, Hopi, with what he called SAE, or "Standard Average European" to see how each handled such concepts as time, space, substance and matter. SAE, he points out, uses its verbs to place the action in time: there is a distinction between past, present and future, a linear notion that fits in easily with notions of progress. Hopi, on the other hand, does not have tenses, but makes statements about the speaker's knowledge of validity of the assertion, distinguishing between reports, expectations, and general truths. Another area that has been particularly carefully studied is that of color names. In an expedition to the Torres Straits about the beginning of this century, the native population were asked to put some color yarns into groups that belonged together: some of the groups looked very odd to the investigators, who explained that the grouping was because of common name rather than common preception.[8] Since then, many more detailed examples have been gathered and studied. Navajo, for instance, has a single word for gray and brown. Hebrew does not have a word for blue, but must distinguish between sky-blue and sea-blue. Shona has the same word for orange, red, and purple. Color proved useful to work with because it is possible to give an objective description of the referent. Any color can be specified by reference

to three criteria, brightness, hue, and saturation. Given a way of controlling physical 'reality', we can go about examining how different languages use different words to organize it. By asking speakers of different languages to name all the colors set up by this classification, we can investigate the differences in semantic structure. The many experiments on this principle would take too long to describe here but the conclusions of one who has worked on the problem a great deal are worth quoting. Lenneberg, who has been involved in the experiments from the beginning[9] sums up as follows:

> "The empirical research .... indicates that the cognitive processes studied so far are largely independent from peculiarities of any natural language and, in fact, that cognition can develop to a certain extent even in the absence of any knowledge of language."[10]

Basically, although there are clear surface distinctions between the way languages map physical reality, and although there are some signs that these distinctions influence the ease of memory and the ease of description, there is no evidence that these differences are fundamental, or that they prevent the formation of concepts. It is true that the Eskimo has many different words for snow, but the English-speaking skier is able to express all the distinctions he needs. There is no evidence, then, that to speak one language rather than another will any way handicap a child's cognitive development: no evidence that

language is a straightjacket preventing thought outside its constrictions.

Bilinguals or Monolinguals

Our question was, does it make any difference to your development whether you are bilingual or monolingual? One extreme position is what has been called the balance theory: it holds that an individual has only a certain amount of language learning ability. If this must be divided between two languages, then his knowledge of each language will be weaker than if he had learned only one. It is impossible to find empirical data to settle the truth or falsity of this hypothesis, for generally our language testing instruments are not precise enough. The majority of studies do however support the thesis, to the extent that in most studies bilinguals have been shown to be weaker than monolinguals in the common language.[11] There is no clear evidence on the level of proficiency attained by bilinguals in their other language; one study (done in New Mexico a decade or so ago)[12] reports that fifty bilingual children did better on the English version than on the Spanish version of the test. There are a number of factors which could account for this result--there is no evidence of the relative difficulty of the two tests, or of the degree to which the tests measure linguistic attainment.

The problem is an important one; the absence of satisfactory evidence highlights its difficulty. Underlying this difficulty

is the complexity of the concept of bilingualism. Recent studies in sociolinguistics have shown just how many kinds and degrees of bilingualism there are. If we wish to describe the linguistic competence and language use of a bilingual person, there are a number of dimensions we must use. First, we would place him on the compound-coordinate axis proposed by Ervin and Osgood,[13] according to whether he has one or two meaning systems; the pure compound bilingual is a person for whom each word in his second language is a translation of a word in his first, and has the same meaning as it, while the pure coordinate has two distinct systems, each language having been learned in a different context. Second, we would consider what Fishman calls the domains of language use, asking which language he uses in each of a number of situations (at home, at school, at work, at church), with each of a number of interlocutors (mother, father, older and younger brothers and sisters, grandparents, uncles and aunts, intimate friends, acquaintances) while dealing with each of a number of topics (food, work, politics, sport, farming). A third set of dimensions would be defined by language skill, when we would consider speaking, writing, listening, and reading. A final set of criteria could be linguistic, as we classify the bilingual's phonology, grammar, lexicon, and control of style.

It becomes clear then that we are including under the cover title 'bilingual' a wide range of possible patterns of linguistic competence and language use. The study we referred to

earlier might well have been biased by such complexity; the subjects could have been quite unused to operate in written Spanish, or to use Spanish at school; the results of the two tests simply reflect this fact, and tell us nothing about their relative mastery of the two languages.

What we must conclude, then, is that while all the evidence so far collected seems to support the balance theory, the notion that if you are learning two languages, you learn them not as well as if you were learning only one, there is need for a great deal more study in the light of the complexity of bilingualism.

That there are probably psychological benefits from bilingualism (Lambert suggests that the bilingual is less likely to be ethnocentric), and definite social benefits, must not blind us to the evidence, tentative as it is, that a bilingual's linguistic skill in each language is less than the monolinguals. The effect of this probably shows up in all areas of school learning, but becomes particularly marked when the bilingual is forced to study in his weaker language.[14]

Causes of Bilingualism

When two language communities come into contact, the result is usually that some members of the communities (or of one community) learn a second language. There are many different forms that the resulting bilingualism can take. For example, all the speakers of Language A might learn Language B, while none of the speakers of Language B learn Language A. Such is

the case on First Mesa with Hopi and Tewa. In such conditions, the question then is, will Language A survive? The example of Hano is a fascinating one.[15] For 250 years, speakers of Tewa have lived in close contact with Hopi on First Mesa: so close, that there is no physical boundary between the two villages, and for the last 50 years or more there has been intermarriage. Throughout this time, the Tewa have been bilingual, (or more, for the Tewa have usually provided the Spanish-, Navajo- or English-speaking interpreters and spokesmen for the Hopi village), but no Hopi has ever learned, or at least admitted to knowing, Tewa. The social and cultural factors behind this deserve very careful study. The most detailed study of language maintenance is that done by Fishman on a number of immigrant languages in the United States.[16] He makes clear the close relation of language maintenance (or loss) to such non-linguistic factors as urbanization, industrialization, de-ethnization, and secularization.

The interrelation of language and society cannot be overemphasized. In a masterful study of English spoken in New York, William Labov has recently shown how closely linguistic factors (specific pronunciations or grammar or lexicon) correlate with socio-economic status.[17] The same type of stratification is to be found in bilingual societies, but the difference of language makes it even easier to identify than when one is dealing with varieties of the same language. Any attempt to change a society's language must reflect a basic change in the stratification of that society.

Bilingual education

Assuming that it is decided for social or political reasons to establish bilingual education, the evidence I have surveyed suggests a number of principles:

1. No one suffers cognitively by learning one language rather than another.

2. But there will possibly be some loss in linguistic ability in each language. Unless this is offset by change of motivation, then there will be a loss of achievement in other subjects.

3. The primary factors controlling successful second language acquisition are social; bilingual education is closely tied to a society that accepts both languages.

But whatever one might decide about bilingual education, the evidence is clear that a student suffers by being forced to study in his weaker language. Whether we offer bilingual education or not, we seem required to offer education in more than one language.

NOTES

1. A slightly different version of this paper was presented at the Conference on Teaching the Bilingual Child held at the University of New Mexico on November 22, 1968.

2. The monograph was published simultaneously by the International Journal of American Linguistics and The Journal of Abnormal and Social Psychology. It was republished in 1965 with supplementary articles by the Indiana University Press.

3. William Bright, editor. Sociolinguistics: Proceedings of the UCLA Sociolinguistics Conference, 1964. The Hague: Mouton, 1966.

4. Sol Saporta. Psycholinguistics: a book of readings. 1961.

5. Noam Chomsky, Aspects of the Theory of Syntax. Cambridge, Massachusetts. Massachusetts Institute of Technology Press, 1965.

6. Osgood and Sebeok, p.4.

7. . . . . His selected writings have been edited by John B. Carroll and published under the title Language, Thought and Reality, The MIT Press, 1956.

8. W. H. R. Rivers, in Reports of the Cambridge anthropological expedition to Torres Straits, 1901.

9. Brown and Lenneberg 1954, Lenneberg and Roberts 1955, etc.

10. Eric H. Lenneberg, Biological foundations of language. New York: John Wiley and Sons, 1967. p. 364.

11. See John Macnamara, Bilingualism and primary education. Edinburgh: University Press, 1966.

12. Morton J. Keston and Carmina Jimenez. A study of the performance on English and Spanish editions of the Stanford-Binet Intelligence Test by Spanish-American children. Journal of Genetic Psychology, 85 (1954) 263-9.

13. Osgood and Sebeok, 139-45.

14. John Macnamara. The effects of instruction in a weaker language. The Journal of Social Issues, 23(1967)121-35.

15. Edward P. Dozier. Resistance to Acculturation and Assimilation in an Indian Pueblo. American Anthropologist. 53 (1951) 56-66.

16. Joshua Fishman, et al. Language loyalty in the United States. The Hague: Mouton 1966.

17. William Labov. The social stratification of English in New York City. Washington: Center for Applied Linguistics, 1966.